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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MAYER, BROWN, ROWE & MAW LLP 1909 K STREET, N.W. WASHINGTON, DC 20006				
EXAMINER YAO, SAMCHUAN CUA				
ART UNIT		PAPER NUMBER		
1733				

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/761,137

Applicant(s)

VAN DIJK ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 16-20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 16-20 and 22-26 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16-18, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiyama (Progress in Science and Engineering of Composites, Proceedings of the ICCM-IV, Tokyo, 1982; hereinafter simply referred to as PSECP).

With respect to claims 16-17, Tsuchiyama discloses a process of an SMC. The process involves coating a metered amount of resin to a pair of films; applying chopped carbon fiber strands between the covering films to form a compactible laminate, wherein the length of the chopped strands ranges from 0.5-4 inches (i.e. 12.7-101.6 mm); and then compacting the laminate together using conventional compaction rollers to form the SMC. (abstract; page 497 last full paragraph, pages 498-499, figure 6).

As noted in a prior office action, while added limitation in this claim is not explicitly disclosed, this limitation appears naturally flow (see the word "*inherent*" in page 4 of a prior office action dated 07-13-05) in the process of Tsuchiyama, because generally finished SMCs are NOT immediately molded to a desired configuration. In fact, SMCs are often stored and transported to a different production line or sold as an unmolded condition to different manufacturers for further molding. Therefore,

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during the storing and transportation period, the finished SMCs must naturally mature (i.e. resin thickening) to a certain extent. Therefore, this added limitation in claim 16 appears to fail to define over the process of Tsuchiyama. In any event, such would have been obvious in the art because it is well known/conventional in the art to form an SMC by compacting a fiber reinforced laminate to a predetermined setting time so that a finished SMC is suitable for further molding to a desired configuration and to also store and transport the SMC before the SMC is subjected to further molding operation.

With respect to claim 18, see page 497 last full paragraph, page 498 last paragraph to page 499, and figure 5.

With respect to claim 20, in light of the similarity of the production processes (especially for a strand comprising 1000 filaments or 6000 filaments), individual filaments must inherently be wetted. Note: this claim does not appear to positively require wetting each individual filaments in a fiber bundle/strand.

3. Claims 19, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiyama (PSECP) as applied to claim 16 above, and further in view of Rinz (US 6,040,391).

With respect to claim 19, Tsuchiyama appears to be silent on an amount of fillers in a coating resin composition. However, it would have been obvious in the art to incorporate up to 70 wt% of filler to a coating composition in forming an SMC of Tsuchiyama, because it is a common practice in the art to form a carbon fiber reinforced SMC, where a resin coating composition includes up to 70 wt% of fillers

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as exemplified in the teachings of Rinz (col. 7 lines 29-63; col. 9 lines 22-36; figure 1).

With respect to claim 23, see the compactor illustrated in figure 1 of the Rinz patent.

With respect to claims 25-26, note the limitation in these claims do not include the maturation operation recited in claim 16. These claims would have been obvious in the art for essentially the same reason as claims 19 and 23.

4. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiyama (PSECP) as applied to claim 16 in numbered paragraph 2, and further in view of JP 11235797 A. Note: a new reference is applied because of Counsel's description of the term "polypropylene/polyamide" in response to a 112 2<sup>nd</sup> rejection to this claim. While Tsuchiyama does not teach using covering films, where each comprises polyethylene/polyamide. However, it would have been obvious in the art to form an SMC of Tsuchiyama using each covering film comprising a mixture of polyethylene and polyamide, because it is old in the art of making a SMC to apply a multi-layered carrier film comprising a laminate of polyethylene, polypropylene, and polyamide on opposing surfaces of a resin compound as exemplified in the teachings of JP '797 (abstract).

### ***Response to Arguments***

5. Applicant's arguments filed on 12-05-05 have been fully considered but they are not persuasive.

On page 6 full paragraph 1, Counsel argued that "Tsuchiyama fails to teach or suggest the present invention ... comprising maintaining the compacted laminate for

a set time period to mature the laminate for further molding". It is respectfully submitted that, simply because Tsuchiyama does not explicitly disclose the above limitation, it does not necessarily mean that the above limitation does not naturally flow from the process of Tsuchiyama. As noted above, generally finished SMCs are NOT immediately molded to a desired configuration. In fact, SMCs are often stored and transported to a different production line or sold as an unmolded condition to different manufacturers for further molding. Therefore, during the storing and transportation period, the finished SMCs must naturally mature (i.e. resin thickening) to a certain extent. Therefore, this added limitation in claim 16 appears to fail to define over the process of Tsuchiyama. In any event, such would have been obvious in the art because it is well known/conventional in the art to to form an SMC by compacting a fiber reinforced laminate to a predetermined setting time so that a finished SMC is suitable for further molding to a desired configuration and to also store and transport the SMC before the SMC is subjected to further molding operation. More important, it is well known and conventional in the art to age or mature a finished SMC before it is subjected to a molding operation as exemplified in the teachings of either Koncelik (US 6,024,908; col. 1 lines 48-65), Hager et al (US 5,747,607; col. 6 lines 53-67; col. 7 lines 64-67; col. 8 lines 57-68) or Seats (col. 1 lines 32-40; col. 8 line 52 to col. 9 line 3).

On page 6 full paragraph 2, Counsel argued that "... *neither Tsuchiyama nor Rinz teaches ... sheet molding compound comprising at most about 75% by weight of filler or rolling the carbon-filled laminate between hold-down pins*". Examiner strongly

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disagrees. See column 7 lines 29-63; column 9 lines 22-36 and figure 1 of the Rinz patent, where Rinz expressly discloses using "up to about 70% by weight" of filler. In figure 1 illustrates a carbon fiber filled laminate being rolled through a compactor comprising a series of rollers (taken to be hold-down rolls).

### ***Conclusion***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
01-23-06